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IS 5037-2 (2004): Straight bevel gears for general engineering and heavy engineering, Part 2: Module and diametral pitches [PGD 31: Bolts, Nuts and Fasteners Accessories]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
सामान्य तथा भारी इंजीनियरिंग के लिए सीधे बेवल गियर्स
भाग 2 मापांक तथा व्यासिय पिच
(पहला पुनरीक्षण)

Indian Standard

STRAIGHT BEVEL GEARS FOR GENERAL
ENGINEERING AND HEAVY ENGINEERING

PART 2 MODULE AND DIAMETRAL PITCHES

(First Revision)

ICS 21.200

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
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NATIONAL FOREWORD

This Indian Standard (Part 2) (First Revision) which is identical with ISO 678 : 1976 'Straight bevel gears for general engineering and heavy engineering — Modules and diametral pitches' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendations of the Transmission Devices Sectional Committee and approval of the Medical Instruments, General and Production Engineering Division Council.

This standard was first published in 1969 and was based on ISO/R 677 : 1968 'Basic rack of straight bevel gears for general engineering and heavy engineering' and ISO/R 678 : 1968 'Modules and diametral pitch of straight bevel gears for general engineering and heavy engineering'. In order to harmonize the standard with latest version of ISO 677 and ISO 678 the committee decided to revise the standard and split it into two parts adopting latest version of ISO Standards. This standard has now been published in the following two parts:

IS 5037(Part 1) : 2004 Straight bevel gears for general engineering and heavy engineering: Part 1
Basic rack

IS 5037(Part 2) : 2004 Straight bevel gears for general engineering and heavy engineering: Part 2
Module and diametral pitches

The text of the ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear, referring to this standard, they should be read as 'Indian Standard', and
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

STRAIGHT BEVEL GEARS FOR GENERAL ENGINEERING AND HEAVY ENGINEERING

PART 2 MODULE AND DIAMETRAL PITCHES

(First Revision)

0 INTRODUCTION

This International Standard, intended essentially to facilitate the establishment of series of cutting tools, is not intended to prevent the use of any unstandardized module or diametral pitch, which can always be obtained by using the tool for the module or diametral pitch corresponding to the next smaller size given in the table.

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies modules and diametral pitches of straight bevel gears for general engineering and heavy engineering.

2 DEFINITIONS¹⁾

2.1 module : The ratio of the pitch, expressed in millimetres, to the number π (or the quotient of the reference diameter, expressed in millimetres, to the number of teeth).

2.2 diametral pitch : The ratio of the number n to the pitch expressed in inches (or the quotient of the number of teeth by the reference diameter expressed in inches).

3 VALUES

Preference should be given to the use of the modules and diametral pitches stated in column I. The module 6,5 in column II should be avoided.

The diametral pitches are given in this International Standard only on a provisional basis; they will be deleted after the period necessary to allow conversion to the metric system.

Modules m

I	II
1	
1.25	1,125
1.5	1,375
2	1,75
2,5	2,25
3	2,75
4	3,5
5	4,5
6	5,5
8	(6,5)
10	7
12	9
16	11
20	14
25	18
32	22
40	28
50	36
	45

Diametral pitches p

I	II
20	
16	18
12	14
10	11
8	9
6	7
5	5,5
4	4,5
3	3,5
2,5	2,75
2	2,25
1,5	1,75
1,25	0,875
1	
0,75	
0,625	
0,50	

NOTES

1 The module of a bevel gear is determined on the complementary cone.

The module and the diametral pitch are defined with respect to the reference surface.

2 For the definition of "basic rack", see ISO 677.

1) Extract from ISO/R 1122, Glossary of gears - Geometrical definitions.

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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